

Title (en)
METHOD AND DEVICE FOR OPERATING A VOLTAGE TRANSFORMER

Title (de)
VERFAHREN UND VORRICHTUNG ZUM BETREIBEN EINES SPANNUNGSWANDLERS

Title (fr)
PROCEDE ET DISPOSITIF POUR LA GESTION D'UN TRANSFORMATEUR DE TENSION

Publication
EP 3724020 B1 20220914 (DE)

Application
EP 18800922 A 20181109

Priority
• DE 102017222797 A 20171214
• EP 2018080772 W 20181109

Abstract (en)
[origin: WO2019115102A1] The invention relates to a device for operating a voltage converter (1), in particular a DC converter, of a motor vehicle, which voltage converter has at least two parallel-connected converter strands (4, 5) which are connected between a high-voltage side (2) and a low voltage side (3) of the voltage converter (1) for converting the voltage, having at least one cooling device (8) carrying a coolant (9) and assigned to the converter strands (4, 5), wherein each of the converter strands (4, 5) is assigned at least one temperature sensor (6, 7), comprising the following steps: a) detecting an input voltage, an output voltage and an operating current of each converter strand (4, 5), b) detecting a current converter strand temperature by means of the respective temperature sensor (6, 7), c) determining a respective coolant temperature as a function of the values detected in steps a) and b), d) comparing the two determined coolant temperatures (T₁, T₂) with each other and e) determining the serviceability of the temperature sensors (6, 7) on the basis of the result of the comparison.

IPC 8 full level
H02H 5/04 (2006.01); **B60L 3/00** (2019.01); **B60L 3/04** (2006.01); **B60L 3/06** (2006.01); **B60L 53/20** (2019.01); **B60W 20/50** (2016.01); **B60W 50/02** (2012.01); **B60W 50/023** (2012.01); **H02H 6/00** (2006.01); **H02H 7/12** (2006.01); **H05K 7/20** (2006.01)

CPC (source: EP US)
B60L 3/003 (2013.01 - EP); **B60L 3/0038** (2013.01 - EP US); **B60L 3/0092** (2013.01 - EP US); **B60L 3/04** (2013.01 - EP US); **B60L 3/06** (2013.01 - EP US); **B60L 53/20** (2019.01 - EP US); **B60W 50/0205** (2013.01 - US); **B60W 50/023** (2013.01 - US); **H02H 5/04** (2013.01 - EP); **H02H 6/00** (2013.01 - EP); **H02H 7/12** (2013.01 - EP); **H02H 7/1213** (2013.01 - US); **H05K 7/20945** (2013.01 - EP US); **B60L 2210/10** (2013.01 - EP US); **B60L 2240/525** (2013.01 - EP US); **B60L 2260/44** (2013.01 - EP); **B60W 20/50** (2013.01 - EP); **B60W 50/0205** (2013.01 - EP); **B60W 50/023** (2013.01 - EP); **H02M 1/325** (2021.05 - EP US); **H02M 1/327** (2021.05 - EP US); **Y02T 10/70** (2013.01 - EP); **Y02T 10/7072** (2013.01 - EP); **Y02T 10/72** (2013.01 - EP); **Y02T 90/14** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
DE 102017222797 A1 20190619; **DE 102017222797 B4 20210520**; CN 111433070 A 20200717; CN 111433070 B 20230606; EP 3724020 A1 20201021; EP 3724020 B1 20220914; US 11807118 B2 20231107; US 2020353829 A1 20201112; WO 2019115102 A1 20190620

DOCDB simple family (application)
DE 102017222797 A 20171214; CN 201880080238 A 20181109; EP 18800922 A 20181109; EP 2018080772 W 20181109; US 201816772898 A 20181109